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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,949	02/12/2004	John Ramsay Crowe	05516.091002	7090

7590 08/19/2004

ROSENTHAL & OSHA, L.L.P.
Suite 2800
1221 McKinney
Houston, TX 77010

EXAMINER

THOMPSON, KENNETH L

ART UNIT PAPER NUMBER

3672

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,949

Applicant(s)

CROWE ET AL.

Examiner

Kenn Thompson

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,9 and 13-18 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because additional information such as the title of the invention should not appear on the abstract page. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 10 is objected to because of the following informalities:

The recitation "after operating" used to limit the "hardfacing" is misleading and should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8, 9 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Schader et al., U.S. 5,663,512.

Regarding claim 1, Schader et al. discloses in figure 1 a roller cone drill bit. Schader et al. discloses a bit body (13) adapted to be coupled to a drill string, the bit body including at least one leg depending therefrom, the leg having a bearing journal thereon (col. 3, lines 14-16), the leg defining a shirrtail portion at an end thereof; a roller cone (21,23) having cutting elements thereon and rotatably affixed to the at least one bearing journal; and a hardface coating applied

Art Unit: 3672

to the shirttail portion (col. 3, lines 22-25), the hardface coating applied by a high pressure/high velocity oxygen fuel torch (col. 6, lines 23-26).

As to claim 9, Schader et al. discloses the hardface coating comprises tungsten carbide (col. 2, lines 27-30).

As to claim 14, Schader et al. discloses 8, the bit body including three legs depending therefrom (col. 3, lines 14-16).

As to claim 15, Schader et al. discloses the hardfacing material comprises a material (col. 2, lines 23-34) that increases a wear resistance of a material of the shirttail portion to which the hardfacing material is applied.

As to claim 16, Schader et al. discloses the hardfacing material comprises a metal carbide (col. 2, lines 23-34).

As to claim 17, Schader et al. discloses the metal carbide comprising vanadium (col. 2, lines 23-34).

As to claim 18, Schader et al. discloses the cutting elements (25) are milled steel teeth (col. 3, lines 18-20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schader et al., U.S. 5,663,512.

As to claim 13, Schader et al. discloses all the claimed subject matter except for the hardfacing being applied after assembly of at least one roller cone to the bit body. However the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

Allowable Subject Matter

Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest all the claimed subject matter including the hardfacing having a thickness of about 0.1 to 0.6 mm and 0.25 to 0.28 mm.

The prior art of record does not disclose or suggest all the claimed subject matter including the hardface coating is applied to a segment of the shirrtail portion bounded at one end by a shirrtail tip and at the other end by a line passing through a center of the bearing journal and perpendicular to a longitudinal axis of the bit body.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hall, U.S. 4,694,918 discloses a similar coating thickness.

Art Unit: 3672

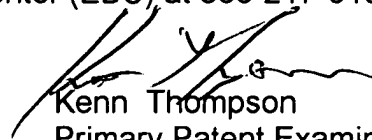
Scott et al., U.S. 6,374,704 and Kane et al., U.S. 4,867,015 disclose a similar coating.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on 703 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

16 August 2004



Kenn Thompson
Primary Patent Examiner
Art Unit 3672